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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/610,954	07/01/2003	Natan E. Parsons	A2-04US1A	4133

7590 10/04/2004

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EXAMINER

KEASEL, ERIC S

ART UNIT PAPER NUMBER

3754

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/610,954

Applicant(s)

PARSONS ET AL.

Examiner

Eric Keasel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/24/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. The restriction requirement is withdrawn. All claims are examined below.

Specification

2. The cross-reference to related applications is somewhat ambiguous as to which applications are being referred to. To clarify the record, "[t]his application" in sentence 1 refers to the present application no. 10/610,954. In sentence 2, "[t]his application" refers to application no. 10/037,473.

Claim Clarification

3. In claim 30, it appears that "to" should be inserted between "constructed" and "apply".
4. In claims 31-36, "said sensor" refers to the armature sensor, not the external object sensor.
5. The examiner takes the position that neither instance above raises to the level of indefiniteness. Correction is left to the discretion of applicant.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 24, 25, 27, 30-33, 37, 38, 40, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodaira (US Patent Number 5,482,250) in view of Bower et al. (US Patent Number 1,978,737).

Kodaira discloses a battery-operated actuator system, comprising: a non-latching solenoid actuator (see Fig. 4) including an armature, spring (22) and a coil (21) constructed to displace said armature by application of a coil drive; and a control circuit constructed to apply to said coil said coil drive upon receiving a signal originated from an external object sensor constructed to detect a user leaving the flusher's vicinity (see the abstract, lines 9 and 10). Kodaira fails to disclose the armature sensor constructed to detect displacement of said armature and wherein said control circuit is constructed to apply said coil drive initially at a first level and subsequently in response to said output from said sensor apply said coil drive at a second level. Bower et al. disclose a similar solenoid-actuated valve that has an armature sensor constructed to detect displacement of said armature, with a control circuit constructed to apply said coil drive initially at a first level and subsequently, in response to said output from said armature sensor, apply said coil drive at a second level.

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Re claim 32, the second level is smaller than the first level, when the first level is read as the circuit with the current going through both coils, and the armature sensor opens the switch when the armature contacts the stop to cause the second, smaller level with the current only through the smaller, holding coil. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the armature sensor and control circuit of Bower et al. with the battery-operated flusher actuator of Kodaira in order to use the increased power during the maximum pull and stroke displacement and to provide a lesser holding current to save energy as taught by Bower et al.

Re claim 33, the second level is larger than said first level when the circuit going through only the upper coil 36 is read as the first level (see page 2, lines 123-127) and the second level is read as the actuating current going through both coils (note that the armature sensor indicates that the armature has not reached the end position because the switch is closed). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the armature sensor and control circuit of Bower et al. (with respect to the obvious, alternate variation of claim 33) in order to provide a maximum pull when the armature is to be moved to the end position corresponding to the open valve position as taught by Bower et al.

8. Claims 26, 34-36, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodaira in view of Bower et al. as applied to claims 24 and 38 above, and further in view of Kempton et al. (US Patent Number 3,789,876).

The modified Kodaira fails to disclose the obvious variation of a latching actuator with a permanent magnet. Kempton et al. disclose the use of a permanent magnet (10) in a similar

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solenoid-actuated valve. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the permanent magnet of Kempton et al. with the valve of the modified Kodaira (as applied to claims 24 and 38 above) in order to latch the valve member in either the open or closed position as taught by Kempton et al.

9. Claims 28, 29, 41, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodaira in view of Bower et al. as applied to claims 24 and 38 above, and further in view of Spencer et al. (US Patent Number 5,477,149).

The modified Kodaira fails to disclose the armature sensor being an acoustic (i.e. sound) sensor. Spencer et al. disclose the use of a sound sensor in a similar solenoid-actuated valve. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the acoustic sensor of Spencer et al. with the valve of the modified Kodaira (as applied to claims 24 and 38 above) in order to provide a less invasive means to indicate the movement of the armature plunger as taught by Spencer et al.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Keasel whose telephone number is (703) 308-6260. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (703) 308-2696. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eric Keasel 29 SEP 2004

Eric Keasel
Patent Examiner
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